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REMARKS

An Excess Claim Fee Payment Letter is submitted herewith to cover the cost of six dependent claims.

Claims 1-67 are all the claims presently pending in the application. Claims 1, 12, 23, 34, 45, 53-57 and 59-60 have been amended to more particularly define the invention. Claims 62-67 have been added to claim additional features of the claimed invention.

It is noted that the claims have been amended solely to more particularly point out Applicant's invention for the Examiner, and not for distinguishing over the prior art, narrowing the claim in view of the prior art, or for statutory requirements directed to patentability. It is further noted that, notwithstanding any claim amendments made herein, Applicant's intent is to encompass equivalents of all claim elements, even if amended herein or later during prosecution.

Claims 1-61 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tognazzini, et al. (U.S. Patent No. 5,886,683) (hereinafter "Tognazzini") in view of Black et al. (U. S. Patent No. 5,802,220).

This rejection is respectfully traversed in view of the following discussion.

I. THE CLAIMED INVENTION

The claimed invention (e.g., as recited in claim 1) is directed to a system for unobtrusively detecting a subject's level of interest in media content. The system includes means for detecting a subject's attention to the media content, means for measuring the subject's relative arousal level, and means for determining the level of interest based on information regarding the subject's arousal level and the subject's attention to the media content.

Conventional systems for measuring a subject's level of interest often estimate a mental decision by monitoring a subject's gaze direction and EEG to detect when a subject is looking at a visual target. Other systems remotely determine a subject's emotional state by broadcasting a waveform of predetermined frequency and energy at the subject, and analyzing the emitted energy to determine physiological parameters (e.g., respiration, pulse, blood pressure, etc.). However, these systems cannot reliably measure a subject's interest in real-time

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by
passively observing the subject.

The claimed invention, on the other hand, includes a means for determining the level of interest based on information regarding the subject's arousal level and the subject's attention to the media content. Therefore, unlike conventional systems, the claimed system is able to reliably assess the subject's interest level in real-time by passively observing the subject.

II. THE TOGNAZZINI AND BLACK REFERENCES

The Examiner asserts that Tognazzini would have been combined with Black to form the claimed invention. Applicant submits, however, that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention.

Tognazzini discloses a method and apparatus for determining what aspect of a computer operation the user is interested in and responding accordingly (Tognazzini at col. 5, lines 57-59). Specifically, the apparatus may include a gaze-tracking device for monitoring a user's gaze.

Black, on the other hand, discloses an apparatus for tracking facial motion through a sequence of images (Black at Abstract).

However, Applicant submits that these references would not have been combined as alleged by the Examiner. Indeed, these references are directed to different problems and solutions.

Specifically, Tognazzini is directed to a apparatus which uses a gaze-tracking system to assess a level of interest, whereas Black is directed to a system for recognizing facial expressions. Therefore, these references are completely unrelated, and no person of ordinary skill in the art would have considered combining these disparate references, absent impermissible hindsight.

Further, Applicant submits that the Examiner can point to no motivation or suggestion in the references to urge the combination as alleged by the Examiner. In fact, contrary to the Examiner's allegations, neither of these references teach or suggest their combination.

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Therefore, Applicant respectfully submits that one of ordinary skill in the art would not have been so motivated to combine the references as alleged by the Examiner. Therefore, the Examiner has failed to make a prima facie case of obviousness.

Moreover, neither of these references nor their combination teaches or suggests "*means for determining said level of interest based on information regarding said subject's arousal level and said subject's attention to said media content*", as recited for example in claim 1.

As noted above, unlike conventional systems which measure a subject's level of interest by estimating a mental decision by monitoring a subject's gaze direction and EEG to detect when a subject is looking at a visual target, or determining a subject's emotional state by broadcasting a waveform of predetermined frequency and energy at the subject, and analyzing the emitted energy to determine physiological parameters (e.g., respiration, pulse, blood pressure, etc.). the claimed invention, includes a means for determining the level of interest based on information regarding the subject's arousal level and the subject's attention to the media content (Application at Figures 1, 3; page 12, line 10-page 14, line 5). Therefore, unlike conventional systems, the claimed system is able to reliably assess the subject's interest level in real-time by passively observing the subject (Application at page 22, line 3-page 23, line 6).

For example, in one exemplary embodiment, the claimed invention uses a Bayesian Belief Network to determine the level of interest based on the information regarding the subject's arousal level and the subject's attention (e.g., see Application at Figure 3).

Clearly, these features are not taught or suggested by the cited references. Indeed, Applicant notes that the Examiner surprisingly has never identified where this feature is taught or suggested by the cited references.

In fact, these features are not taught or suggested by the references. Instead, as explained above, Tognazzini is merely directed to a gaze-based tracking system, and Black is merely directed to a system which recognizes facial gestures. Nowhere do either of these references teach or suggest a means for determining the level of interest based on information regarding the subject's arousal level and the subject's attention to the media content, as in the claimed invention.

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Therefore, Applicant submits, that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention. Therefore, the Examiner is respectfully requested to withdraw this rejection.

III. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 1-67, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 09-0441.

Respectfully Submitted,



Phillip E. Miller, Esq.
Reg. No. 34,386

Date:

12/29/03

McGinn & Gibb, PLLC
8321 Old Courthouse Rd. Suite 200
Vienna, VA 22182-3817
(703) 761-4100
Customer No. 21254

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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that the foregoing Amendment was filed by facsimile with the United States Patent and Trademark Office, Examiner Steven P. Sax, Group Art Unit # 2174 at fax number (703) 872-9306 this 29th day of December, 2003.



Phillip E. Miller

Reg. No. 46,060